CLAIMS:

1. A method of preferentially delivering an active agent to a reservoir cell of a mammalian subject comprising:

administering to the mammalian subject a lipid-active agent complex comprising the active agent and further comprising at least one targeting ligand on the outer surface of the lipid-active agent complex that binds a group/family of markers on the surface of the reservoir cell, the reservoir cell being infected with, or susceptible to infection with, an infectious agent.

2. The method of Claim 1, wherein the infectious agent is a virus.

3. The method of Claim 1, wherein the infectious agent is a bacterium.

4. The method of Claim 1, wherein the infectious agent is a fungus.

5. The method of Claim 1, wherein the infectious agent is a protozoan.

6. The method of Claim 2, wherein the virus is selected from the group consisting of HIV-1, HIV-2, HCV, CMV, HSV, EBV, HPV, influenza virus, and Ebola virus.

7. The method of Claim 3, wherein the bacterium is selected from the group consisting of *Mycobacterium tuberculosis* and *Mycobacterium spec.*

8. The method of Claim 5, wherein the protozoan is selected from the group consisting of *Leishmania* amastigotes and the discrete maturation stages of the *Plasmodium* life cycle.

9. The method of Claim 1, wherein the lipid-active agent complex is a liposome-active agent complex.

10. The method of Claim 1, wherein the active agent is a plant lectin.

11. The method of Claim 1, wherein the active agent is an anti-viral drug.

12. The method of Claim 11, wherein the active agent is an anti-HIV drug.

13. The method of Claim 12, wherein the active agent is indinavir, saquinavir, nelfinavir, or tenofovir disoproxil fumarate.

14. The method of Claim 1, wherein the active agent is an anticancer drug, an antifungal drug, an antibacterial drug, or an immunomodulatory agent.

15. The method of Claim 1, wherein the lipid-active agent complex further comprises one or more secondary active agents.

16. The method of Claim 1, wherein the lipid-active agent complex further comprises one or more accessory factors, such as bivalent cations, co-enzymes, enzyme activators, or pH-modifying agents.

17. The method of Claim 1, wherein the active agent is a cytotoxic agent.

18. The method of Claim 1, wherein the active agent is an apoptosis inhibitor.

19. The method of Claim 1, wherein the active agent is an immunomodulatory agent.

20. The method of Claim 1, wherein the active agent is a small interfering RNA (siRNA).

21. The method of Claim 1, wherein the active agent is a sense or an anti-sense RNA.

22. The method of Claim 1, wherein the active agent is an expression vector suitable for dendritic cell-mediated vaccination, such as tumor vaccination.

23. The method of Claim 1, wherein the active agent is a preprocessed protein or peptide suitable for dendritic cell-mediated vaccination, such as tumor vaccination.

24. The method of Claim 19, wherein the immunomodulatory agent is an immunosuppressant.

25. The method of Claim 19, wherein the immunomodulatory agent is an immunoactivating agent.

26. The method of Claim 9, wherein the active agent is encapsulated in the liposome of the liposome-active agent complex.

27. The method of Claim 1, wherein the infectious agent is susceptible to the active agent.

28. The method of Claim 1, wherein the administering is by a transvascular route.

29. The method of Claim 1, wherein the administering is by a subcutaneous route.

30. The method of Claim 1, wherein the administering is by an intradermal route.

31. The method of Claim 1, wherein the administering is by a bone-marrow-directed route.

32. The method of Claim 1, wherein the administering is by an intraplacental route.

33. The method of Claim 1, wherein the administering is by an intrauteral route.

34. The method of Claim 1, wherein the administering by an intrahepatic route.

35. The method of Claim 1, wherein the administering is by an intraperitoneal route.

36. The method of Claim 1, wherein the administering is by a parenteral route.

37. The method of claim 34, wherein the administering by the intrahepatic route by infusion into the hepatic artery.

38. The method of Claim 1, wherein the reservoir cell is a dendritic cell, a pre-monocytic myeloid lineage-associated precursor cell, a monocyte, a macrophage, or a T cell.

39. The method of Claim 38, wherein the dendritic cell is a myeloid dendritic cell, a follicular dendritic cell, or a plasmacytoid dendritic cell.

40. The method of Claim 38, wherein the T cell is a $CD4^+$ T-helper cell, a $CD4^+$ T-memory cell, a $CD8^+$ T-memory cell, or a $CD4^+$ regulatory T cell.

41. The method of Claim 1, wherein the targeting ligand specifically binds a C-type lectin receptor.

42. The method of Claim 1, wherein the targeting ligand specifically binds a non-C-type lectin receptor expressing C-type lectin-like carbohydrate recognition domains.

43. The method of Claim 41, wherein the targeting ligand is a fucose or polyfucose derivative of cholesterol.

44. The method of Claim 42, wherein the targeting ligand is a fucose or polyfucose derivative of cholesterol.

45. The method of Claim 41, wherein the targeting ligand is a galactose or polygalactose derivative of cholesterol.

46. The method of Claim 42, wherein the targeting ligand is a galactose or polygalactose derivative of cholesterol.

47. The method of Claim 1, wherein the active agent is a small molecule (e.g., a chemotherapeutic).

48. The method of Claim 1, wherein the active agent is a medium-sized molecule (e.g., an oligo- or polynucleotide).

49. The method of Claim 1, wherein the active agent is a large molecule (e.g., a protein).

50. The method of Claim 10, wherein the plant lectin is Con-A.

51. The method of Claim 10, wherein the plant lectin if MHL.

52. A method of preferentially delivering a plant lectin to a reservoir cell of a mammalian subject comprising:

administering to the mammalian subject a lipid-active agent complex comprising a plant lectin and further comprising at least one fucose, polyfucose, or polyfucose derivative that binds a CTL/CTLD receptor on the surface of the reservoir cell, the reservoir cell being infected with, or susceptible to infection with, an infectious agent.

53. The method of claim 52, wherein the plant lectin is Con-A.

54. The method of claim 52, wherein the plant lectin is MHL.

55. The method of claim 52, wherein the polyfucose derivative is a fucosyl-cholesterol derivative.

56. The method of claim 53, wherein the lipid-plant lectin complex further comprises Ca^{2+} and transition-metal ions.

57. The method of claim 54, wherein the MHL is a dimeric or multimeric variant of MHL.

58. The method of claim 52, wherein the lipid-plant lectin complex comprises a lipid to plant lectin ratio between 5:1 to 7:1.

59. The method of claim 52, wherein the lipid-plant lectin complex is between 30-250 nm in diameter.

60. A targeting system for delivery of an active agent to a reservoir cell comprising,

a lipid-active agent complex comprising the active agent, and further comprising a targeting ligand on the outer surface of the lipid-active agent complex.

61. The targeting system of claim 60, wherein the lipid-active agent complex is a liposome-active agent complex.

62. The targeting system of claim 61, wherein the active agent is a plant lectin.

63. The targeting system of claim 60, wherein the targeting ligand is fucose, polyfucose, or polyfucose derivative.

64. A targeting system for delivery of a plant lectin to a reservoir cell comprising,

a liposome-active agent complex wherein the active agent is a plant lectin, and

a fucose, polyfucose, or polyfucose derivative on the outer surface of the liposome-active agent complex.

65. The targeting system of claim 64, wherein the plant lectin is Con-A.

66. The targeting system of claim 64, wherein the plant lectin is MHL.

67. The targeting system of claim 65, wherein the liposome-active agent complex further comprises Ca^{2+} and transition-metal ions.

68. The targeting system of Claim 64, wherein the liposome-active agent complex further comprises one or more accessory factors, such as bivalent cations, co-enzymes, enzyme activators, or pH-modifying agents.

69. The targeting system of claim 64, wherein the liposome-active agent complex comprises a lipid to active agent ratio between 5:1 to 7:1.

70. The targeting system of claim 64, wherein the liposome-active agent complex is between 30-250 nm in diameter.

71. The targeting system of claim 64, wherein the liposome-active agent complex comprises a lipid to active agent ratio between 3:1 to 10:1.

72. The targeting system of claim 64, wherein the liposome-active agent complex is between 30-250 nm in diameter.

73. The targeting system of claim 64, wherein the liposome-active agent complex comprises a lipid to active agent ratio between 3:1 to 100:1.

74. The targeting system of claim 64, wherein the liposome-active agent complex is between 30-250 nm in diameter.

75. A method for preferentially delivering an active agent to a cell with a chronic non-infectious disease comprising,

administering a lipid-active agent complex comprising the active agent and further comprising at least one targeting ligand on the outer surface of the lipid-active agent complex, wherein the targeting ligand binds a marker on the cell.

76. A method for treating HIV infected cells comprising:

administering a liposome-plant lectin complex to the HIV infected cells, wherein the outer surface of the liposome comprises a fucose derivative.

77. The method of claim 76, wherein the fucose derivative is Fuc-4C-Chol.

78. The method of claim 76, wherein the plant lectin is Con-A.

79. The method of claim 76, wherein the administering is by a subcutaneous route.

80. A targeting system for use in the treatment of HIV comprising a liposome-Con A complex, wherein the outer surface of the liposome comprises a Fuc-4C-Chol.

81. A method for the intracellular delivery of an active agent to a reservoir cell comprising,

adminisitering a lipid-active agent complex to the reservoir cell, wherein the lipid-active active agent complex comprises an active agent that is encapsulated in the complex and further comprises a CRD receptor-specific targeting ligand on the outer surface of the lipid-active agent complex.